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AMSAT NEWS SERVICE
ANS-155

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-155 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 155.01
  From AMSAT HQ KENSINGTON, MD.
DATE June 4, 2017
To All RADIO AMATEURS
BID: $ANS-155.01

2017 AMSAT-NA Board of Directors Nominations Due June 15

It's time to submit nominations for the upcoming AMSAT-NA Board of Directors election. Four directors' terms expire this year: Barry Baines, WD4ASW, Jerry Buxton, N0JY, Drew Glasbrenner, KO4MA, and Bob McGwier, N4HY. In addition, up to two Alternates may be elected for one year terms.

A valid nomination requires either one Member Society or five current individual members in good standing to nominate an AMSAT-NA member for Director. Written nominations, consisting of the nominee's name and call, and the nominating individual's names, calls and individual signatures should be mailed to: AMSAT-NA, 10605 Concord St, #304 Kensington, MD 20895-2526.

In addition to traditional submissions of written nominations, which is the preferred method, the intent to nominate someone may be made by electronic means. These include e-mail, fax, or electronic image of a petition. Electronic petitions should be sent to martha(a)amsat.org or faxed to (301)822-4371.

No matter what means is used, petitions MUST arrive no later than June 15th at the AMSAT-NA office. If the nomination is a traditional written nomination, no other action is required. If it is other than this, i.e. electronic, a verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations on June 15th.

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS.

[ANS thanks Paul, N8HM, for the above information]

Assistance Needed Recovering UNSW-ECO0 and i-INSPIRE 2 Cubesats

Joon Wayn, part of the AU02 (UNSW-EC0) and AU03 (i-INSPIRE 2) Australian team of QB50 cubesats, requests assistance from experienced and well-equipped foreign HAM amateurs experts.

Joon reports, our satellite was deployed last week and we have been unable to hear any beacons coming from it. We had several brainstorm sessions to identify possible configurations that could be changed to optimize the occurrence antenna redeployment sequence. Based on this, we devised a set of commands that reflect these changes in configurations that needs to be uplinked to the satellite. We have attempted to uplink these commands at 50W transmit power, but there's no response so far.

We strongly believe the satellite is still alive but has an undeployed antenna. As such, we require sufficient transmit gain in both transmit power and antenna gain to achieve positive uplink margin. Our problem is that we do not have the equipment to achieve the required transmit power to overcome the losses due to an unstowed configuration.

We have a recorded *.wav file that you can play through radio in FM mode to perform the uplink.

Relevant technical info:

- The sat uses Nanocom ANT430 antenna that is still stowed. The stowed antenna
   is exposed on the outside of the spacecraft.
- The sat uses Nanocom U482C transceiver.
- The OBC might be trickling between on and off states and hence a daytime or
   dusk zenith pass is optimal for the uplink. Our ground station:
- 21 el H and 21el V yagi configured in RHCP
- Kenwood TS-2000 in FM mode with 50W transmit power.

Hope you have a good weekend, and do not hesitate to contact me at cjwayn(a)unsw.edu.au if you would be willing to help. Your attention has been much
appreciated.

[ANS thanks Joon Wayn for the above information]

Flight Qualified Digipeater and DTMF Transponder Available

If anyone has access to a ride to space on a HOST, remember there is a fully qualified flight unit DIGIPEATER and DTMF transponder module ready to fly as an attached payload to any HOST spacecraft. Lets call it QIKCOM-3. The mission of the identical QIKCOM-2 is described here:

http://aprs.org/qikcom-2.html

QIKCOM-2 flight Unit #1 was delivered back in 2015, and it might finally fly this fall. So, the backup FLIGHT unit is also ready to fly (attached to a
suitable host).

Unfortunately, the Air Force (responsible for all DoD satellite launches) has unilaterally declared that they will not accept any more Amateur Radio student satellites from the Naval Academy for flight on DoD launches, and so this unit is available to anyone that can get it attached to a payload and get it launched.

[ANS thanks Bob, WB4APR, for the above information]

VUCC Awards/Endorsements for May 2017

Here are the endorsements and new VUCC Satellite Awards issued by the ARRL for
the period May 1, 2017 through June 1, 2017.

Congratulations to all those who made the list this month!

CALL	GRIDS
KO4MA	1539
KB1RVT	1524
AC0RA	1143
W5PFG	1046
N8RO	959
N8HM	951
K8TL	901
XE1AO	584
KK4FEM	404
N6UK	400
WD9EWK	350
K5ND	301
AI6GS	230
K8BL	220
N1AIA	216
PV8DX	201

N9EAT 135 (NEW VUCC)
VR2XMT 111 (NEW VUCC)
K7TAB 100 (NEW VUCC)
KA9P 100 (NEW VUCC)

This list was developed by comparing the ARRL .pdf listings for May 1st and June
1st, 2017. It's a visual comparison so omissions are possible. Apologies if your call was not mentioned. Thanks to all those who are roving to grids that
are rarely on the birds. They are doing most of the work!

[ANS thanks John, K8YSE, for the above information}

Amateur Radio BIRDS-1 CubeSat Constellation

The BIRDS-1 constellation consists of five 1U CubeSats (BIRD-B, BIRD-J, BIRD-G,
BIRD-M and BIRD-N). They are planned to launch the ISS on a SpaceX Falcon 9 CRS-11 on June 3, 2017. The satellites are made of the exactly same design including the radio frequencies to be used and will be deployed from the ISS later in the year.

The main mission of the constellation is to do experiments on radio communication with a CubeSat constellation via a network of UHF/VHF amateur radio ground stations all over the world.

The challenge is to distinguish each satellite from the four satellites transmitting with the same frequency, hand over operation of a satellite from
one ground station to another and assemble the satellite data, such as housekeeping telemetry, music and the Earth images, obtained at different ground
stations.

Amateur radio enthusiasts are asked to join the network to assist in the data
downlink and reconstruction of the patchy satellite data into one meaningful data. Orbit information and operational plan of each satellite will be made available to the amateur radio community in the world. Software to decode the
satellite data will be also made available.

The respective amateur ground stations that can successfully decode the telemetry data, music and the Earth images, shall receive a QSL card from the
BIRDS team. The data reconstructed by the effort of the amateur ground station
network will be made public to share the sense of satisfaction and achievement.

A particularly interesting mission of BIRDS project is the SNG mission that exchanges music via a digi-singer. It is an outreach-oriented mission. First,
music in MIDI format is uploaded from ground. Then the MIDI file is processed
on-board using a vocal synthesizer. Finally, the processed music is sent back to
Earth using UHF antenna as voice FM data.

During organized events on space utilization with schools or general public, music could be heard using a common hand-held receiver and hand-made Yagi antenna positioned to track the satellite at each given pass over the region.
This has a tremendous effect on awareness of radio communication among school
children and general public, especially in the countries participating in the
BIRDS project, Japan, Ghana, Mongolia, Nigeria and Bangladesh.

Proposing to use CW, 1k2 AFSK FM, audio FM and 9k6 GMSK downlinks. The IARU has
coordinated a downlink frequency of 437.375 MHz.

BIRDS project information:
http://birds.ele.kyutech.ac.jp/
http://birds.ele.kyutech.ac.jp/amateur.html
http://birds.ele.kyutech.ac.jp/newsletter.html
https://www.facebook.com/Joint-Global-Multi-Nation-Birds-BIRDS-project-171403156542445/

Download the Paper – IAA-CU-15-01-16 Five-nations CubeSat constellation; An inexpensive test case for learning and capacity building
https://www.researchgate.net/publication/289868265_IAA-CU-15-01-16_Five-nations_CubeSat_constellation_An_inexpensive_test_case_for_learning_and_capaci-_ty_building

The IARU Satellite Frequency Coordination pages are hosted by AMSAT-UK at
http://www.amsat.org.uk/iaru/

[ANS thanks AMSAT-UK for the above information]

AMSATSA Reports Significant Progress with the Kletskous Cubesat

At the annual AMSATSA space symposium, significant progress with the Kletskous
CubeSat was reported by the development team. A new design space frame was released, which is constructed on a locked-in basis and now requires assembly
screws. Although based on the original design by Deon Coetzee, ZR6DE, it is much
lighter and fully machine produced with the advantage that its manufacture is
repeatable exactly as the original. The Electronic Power System is in its final
stages and offers advanced controls over the powering of the satellite even should the battery failed.

The Symposium itself was a great success and as delegates said is the highlight
on the annual amateur radio technology calendar. Planning for the 2018 is already underway. For more, visit www.amsatsa.org.za

[ANS thanks the SARL weekly news in English 2017-6-3 for the above information]

MacDoppler Version 2.25 released

Dog Park Software is pleased to announce that MacDoppler Version 2.25 has been
released and can be downloaded from:
http://www.dogparksoftware.com/MacDoppler.html

What's New in this release ?

* Added Yaesu FT-991 driver.
* Added Prosistel Combo azel driver.
* Added Tuning Dial Tracking to IC-910.
* Show Tuning Dial Tracking capability.
* Added Rotator Stop button.
* Display offsets in VFO panel Uplink and Downlink.
* Fixed FT-847, FT-817 in-band doppler.
* Fixed GS232B ERC Rotor Readback.

[ANS thanks Dog Park Software and Southgate for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
ku4os at amsat dot org